SIDNEY

Montana's Sunrise City

Facility Requirements & Alternatives Meeting
Sidney-Richland Regional Airport (SDY)

April 20, 2026

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Agenda

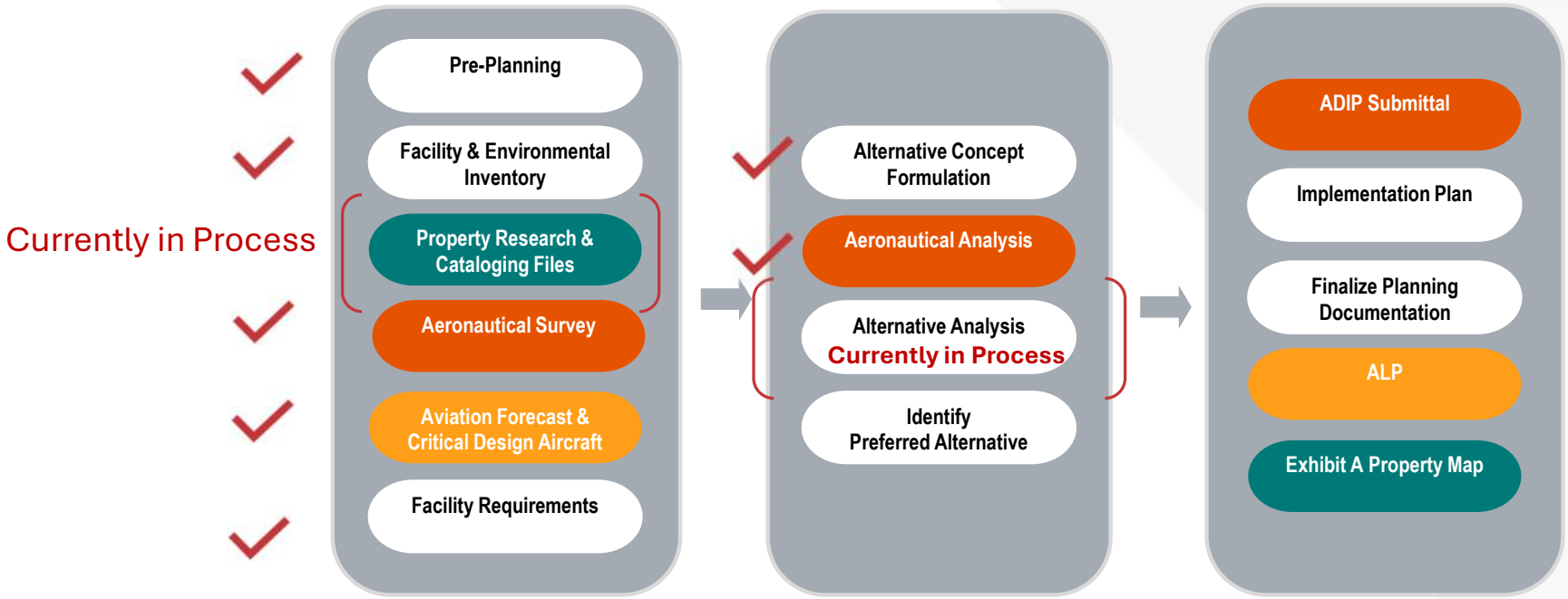


- Introductions
- Project Workflow & Progress to Date
- Review Critical Design Aircraft
- Weather Analysis
- Outreach Findings
- Runway Length
- Airside Alternatives
  - Runway 01/19
  - Runway 11/29
- Terminal/Apron Alternatives
- Open Discussion
- Questions

PAC Participants

- KLJ Project Team
  - Kent Penney- Lead Aviation Planner
  - Brooke Barber- Aviation Planner
  - Nathan Schroht- Airport Engineer
- Agencies Involved
  - FAA, Helena ADO
    - Jennifer Schildgen, Planner
    - Tracy Stoner, Project Manager
  - MT DOT, Aeronautics
    - Karen Hallenbeck, Airport/Airways Bureau Chief
- Planning Advisory Committee
  - Ryan Huotari- Airport Manager
  - Walt McNutt- Airport Authority Board
  - Troy Jensen- Airport Authority Board
  - Josh Johnson- Richland County Public Works
  - Mike Petrik- Richland Aviation
  - Jennifer Doty- Sidney Health Center
  - Randy Olson- Richland Economic Development
  - Brett Berry- Airport Authority Board/Sidney Health

Project Workflow & Progress to Date



Completed Task

FAA Approval Point

Aeronautical Survey

Exhibit A Components

Critical Design Aircraft

Critical Design Aircraft

Most demanding aircraft that utilizes the airport with 500 or more annual operations.
Can be a specific aircraft or a group of design characteristics.

Aircraft Approach Category (91 to 120 Kts)

Aircraft Design Group (49' to 78' wingspan)

Visibility Minimums (< than 1 mile but ≥ ¾ mile)

B – II – 4000

AAC		ADG		TDG		MTOW	
A/B	5,494	I	3,832	1-A/B	3,068	< 12,500 lbs	5,164
C/D	60	II	1,722	2-A/B	2,468	≥ 12,500 lbs	390

**The existing and proposed future critical design aircraft is the A/B-II classification with a TDG 2-A*

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Airport Operations

ID	Make	Model	Type	AAC	ADG	TDG	MTOW (lbs.)	2024 Ops
C240	Cessna	Corvalis TTx	Piston	A	I	1-A	3,600	34
BE36	Beechcraft	Bonanza 36	Piston	A	I	1-A	3,650	30
C182	Cessna	182	Piston	A	I	1-A	3,100	14
P212	Tecnam	P-2012	Piston	B	I	1-A	8,113	2,584
C402	Cessna	402 Utiliner	Piston	B	I	2-A	6,300	930
C340	Cessna	340	Piston	B	I	1-A	5,990	100
BE99	Beechcraft	AIRLINER 99	Turboprop	B	I	1-A	11,300	20
BE10	Beechcraft	King Air 100	Turboprop	B	I	1-A	11,800	14
C510	Cessna	Citation Mustang	Jet	B	I	1-A	8,645	14
PC12	Pilatus	PC-12	Turboprop	A	II	2-A	10,450	1,212
BE20	Beechcraft	King Air 200	Turboprop	B	II	2-A	12,500	224
BE9L	Beechcraft	King Air C90	Turboprop	B	II	1-A	10,485	118
B350	Beechcraft	Super King Air 350	Turboprop	B	II	2-A	15,000	28
C25B	Cessna	Citation CJ3	Jet	B	II	2-A	13,870	24
E55P	Embraer	Phenom 300	Jet	B	II	1-A	17,968	20
C441	Cessna	Conquest II	Turboprop	B	II	1-A	9,850	14
C560	Cessna	Citation Ultra	Jet	D	II	2-A	16,300	36
Other Verified Operations				A/B	I	-	-	48
				A/B	II	-	-	15
				C/D	I	-	-	8
				C/D	II	-	-	6

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Wind & Weather Conditions

ALL-WEATHER WIND COVERAGE				
CONFIGURATION	CROSSWIND COMPONENT			
	10.5 KNOTS	13 KNOTS	16 KNOTS	20 KNOTS
RUNWAY 1-19	83.27%	90.28%	94.78%	-
RUNWAY 11-29	92.87%	97.52%	99.32%	-
COMBINED	98.51%	99.59%	99.93%	-
SOURCE: SDY AWOS (2015-2024, HOURLY) FROM NATIONAL CLIMATIC DATA CENTER				
85,824 TOTAL OBSERVATIONS				

INSTRUMENT FLIGHT RULES (IFR) WIND COVERAGE				
CONFIGURATION	CROSSWIND COMPONENT			
	10.5 KNOTS	13 KNOTS	16 KNOTS	20 KNOTS
RUNWAY 1-19	87.34%	91.64%	93.77%	-
RUNWAY 11-29	86.99%	94.99%	98.76%	-
COMBINED	97.42%	99.33%	99.85%	-
SOURCE: SDY AWOS (2015-2024, HOURLY) FROM NATIONAL CLIMATIC DATA CENTER				
4,029 TOTAL OBSERVATIONS				
IFR = VISIBILITY LOWER THAN 3 MILES OR CEILING LOWER THAN 1,000 FEET				

Weather Condition	Percentage	Days Per Year	Hours Per Year
VMC	95.31%	347.9	8,349
Usable IMC	3.81%	13.9	334
Usability	**99.12%**	**361.8**	**8,683**
Below Weather Minimums	0.88%	3.2	77
Total	**100.00%**	**365.0**	**8,760**

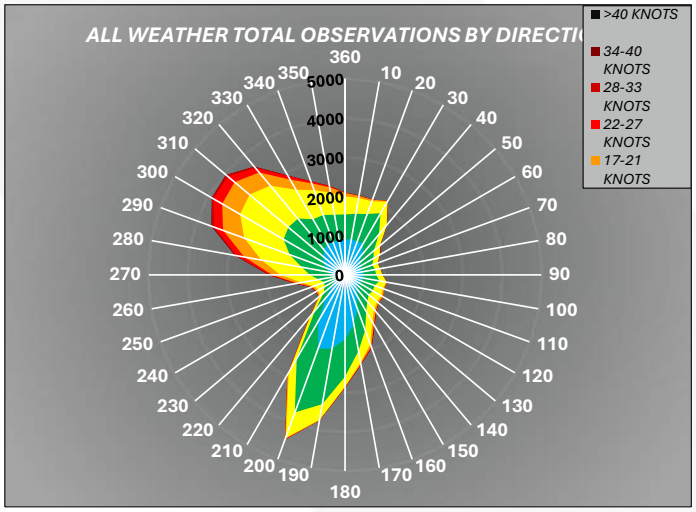


Table B-1. Allowable Crosswind Component per Runway Design Code (RDC)

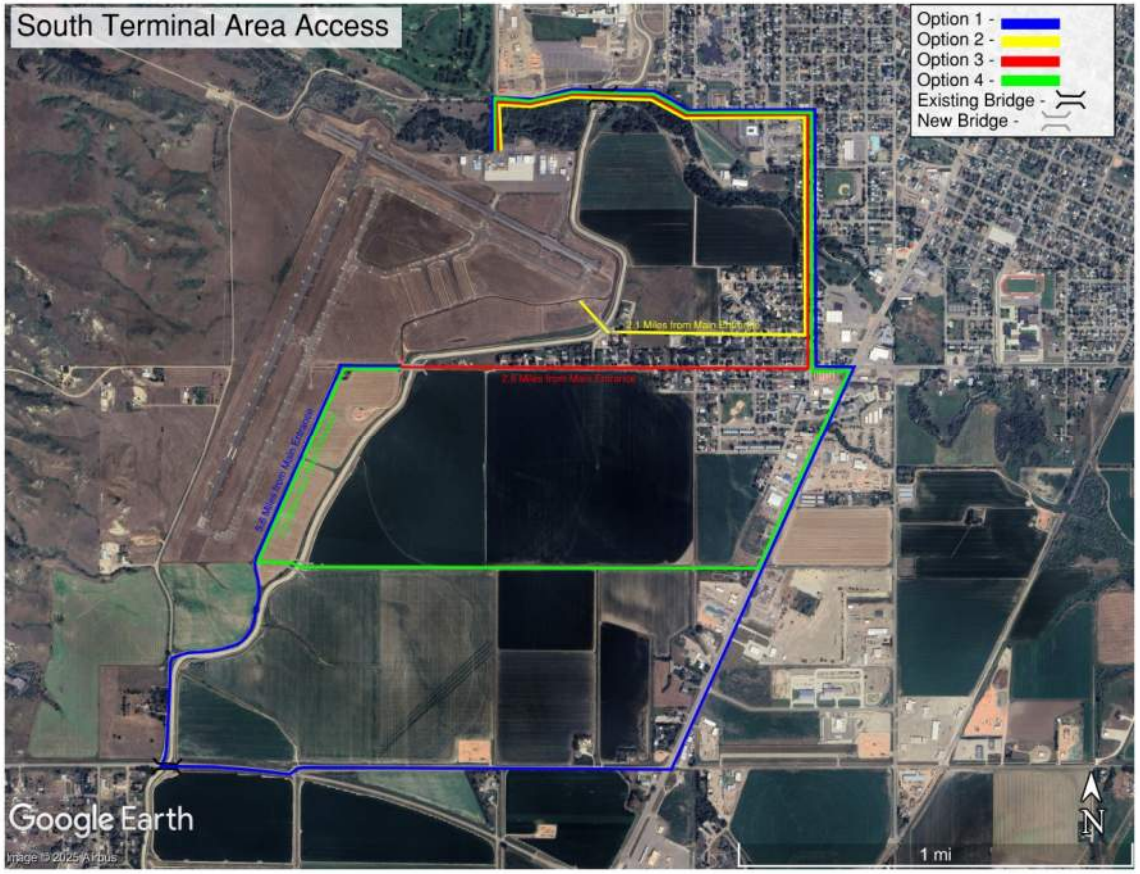
RDC	Allowable Crosswind Component
A-I and B-I *	10.5 knots
A-II and B-II	13 knots
A-III, B-III, C-I through D-III D-I through D-III	16 knots
A-IV and B-IV, C-IV through C-VI, D-IV through D-VI	20 knots
E-I through E-VI	20 knots

Note: * Includes A-I and B-I small aircraft.

Outreach Findings

- South Airport Development
  - Generally, airport users and tenants are interested in development to the south should it be made available, but there have been no concrete plans for anyone to construct there in the immediate future while access is still restricted
- Instrument Approach Procedures
  - Current minimums for Runway 01/19 IAP are sufficient
  - Interest in adding approach lighting to RW 01
  - Interest in adding an additional IAP to Runway 11/29, with special interest in the Runway 29 end, challenges with the Rwy 11 end due to terrain
- Runway Length
  - Length of Runway 01/19 is adequate
  - Length of 11/29 can be short in icy weather or times of high wind
- Hangar Space
  - Availability is adequate and while several users express their support of the airport and their desire to operate at SDY, there is no expressed need for additional hangar space
- Cape Air Commercial Service
  - Generally sufficient but some traffic is lost to Williston due to flight schedule, cancellations, and desire to travel on larger aircraft

South Hangar Area Access



- Hwy 200:
  - Existing Bridge – 5.6 miles
- 13th Street:
  - New Bridge – 2.1 miles
- 14th Street:
  - New Bridge – 2.6 miles
- Quarter Section Line:
  - New Bridge – 4.2 miles

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Runway Length Analysis

Airport Data		
Airport Elevation	1,985.1	
Mean Max Temp	87.8°F	
Runway Grade	RW 1/19	RW 11/29
Existing Runway Length	5,705 ft	4,024 ft
Aircraft	**Dry Conditions (feet)**	**Wet Conditions (feet)**
Beech 55 Barron	3,933	4,523
Cessna 340	4,187	4,815
Cessna 402B	3,776	4,342
Cirrus SR 22	2,506	2,882
Mooney M20J	3,470	3,990
Pilatus PC12	3,201	3,682
Beech King Air 350ER	5,727	6,586
Beechcraft King Air C90	2,969	3,414
Cessna Citation Jet 1	4,571	5,257
Cessna Citation Jet 3	3,989	4,587
Phenom 300	3,989	4,587
Beechcraft King Air B200GT	3,904	4,490
Cessna 560 XL	4,348	5,000

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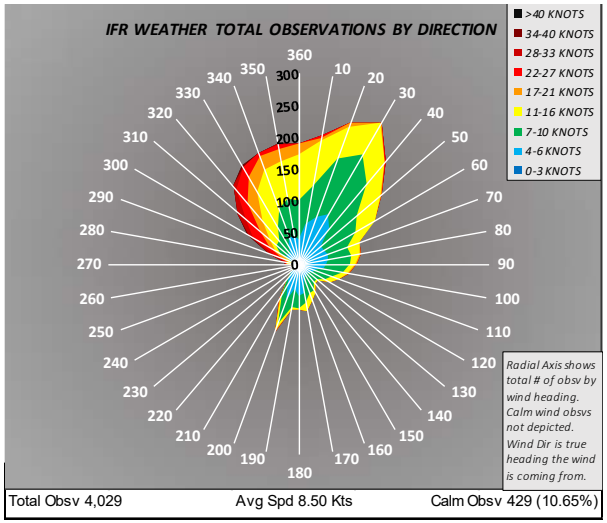
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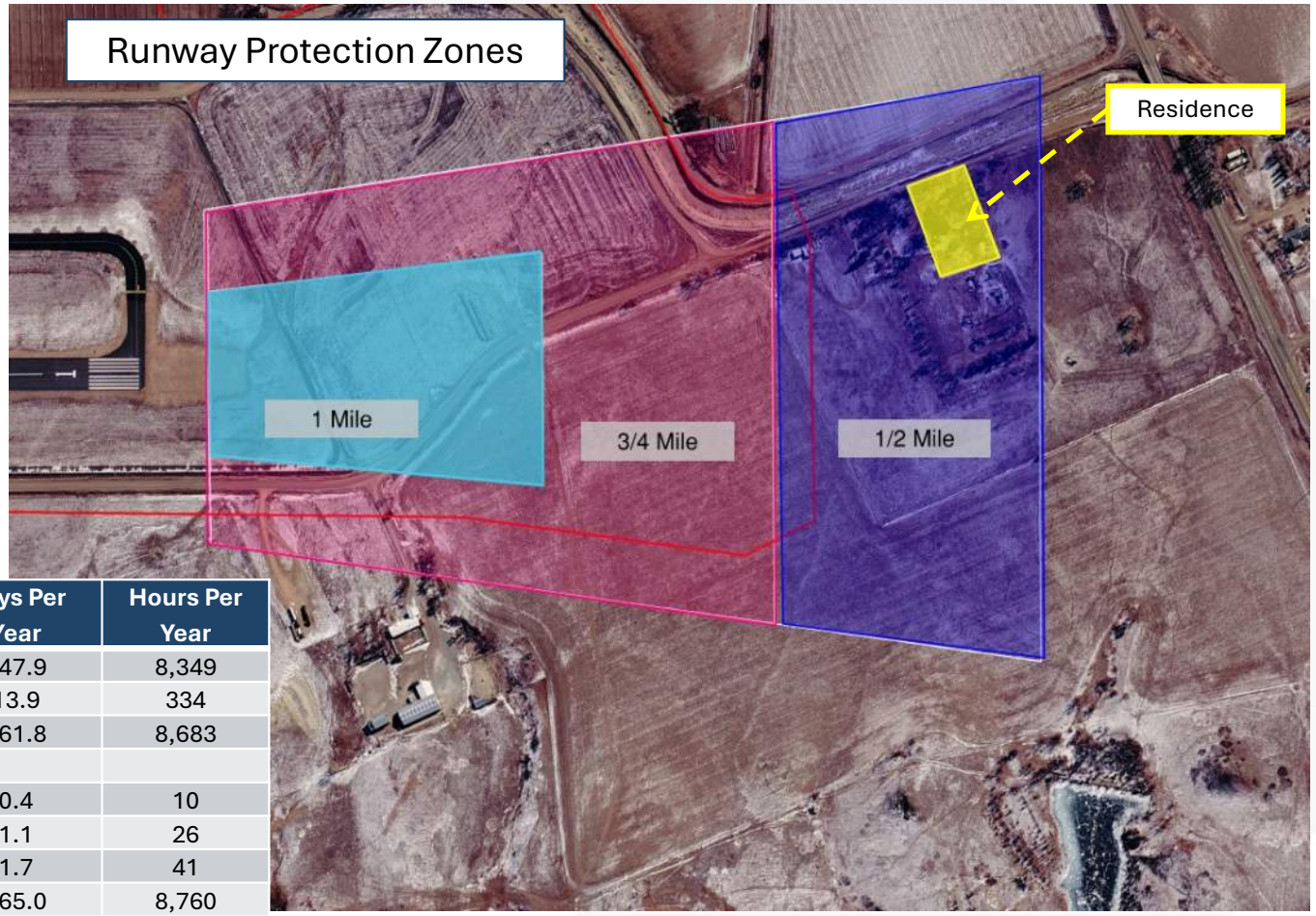
Airside Alternatives

- **Runway 01/19**
  - Runway 1 Instrument Approach Improvements
  - Runway 19 threshold and centerline separation
  - Obstructions impacting the circling approach
  - Options for a full parallel taxiway
- **Runway 11/29**
  - New Instrument Capabilities
  - Obstructions impacting the circling approach
- **Runway Length**



Runway 1 Approach Improvements





Weather Condition	Percentage	Days Per Year	Hours Per Year
VMC	95.31%	347.9	8,349
Usable IMC (300' 7/8 mile)	3.81%	13.9	334
Usability	99.12%	361.8	8,683
Potential Improvements			
250' ¾ mile	0.11%	0.4	10
200' ½ mile	0.30%	1.1	26
Still Below Weather Minimums	0.47%	1.7	41
Total	100.00%	365.0	8,760

Full Parallel Taxiway

- IAP Development Criteria
  - ≥ 1 mile (Recommended)
  - ¾ to < 1 mile (Required)
  - < ¾ mile (Required)

Per Table K-1 AC 150/5300-13B Airport Design



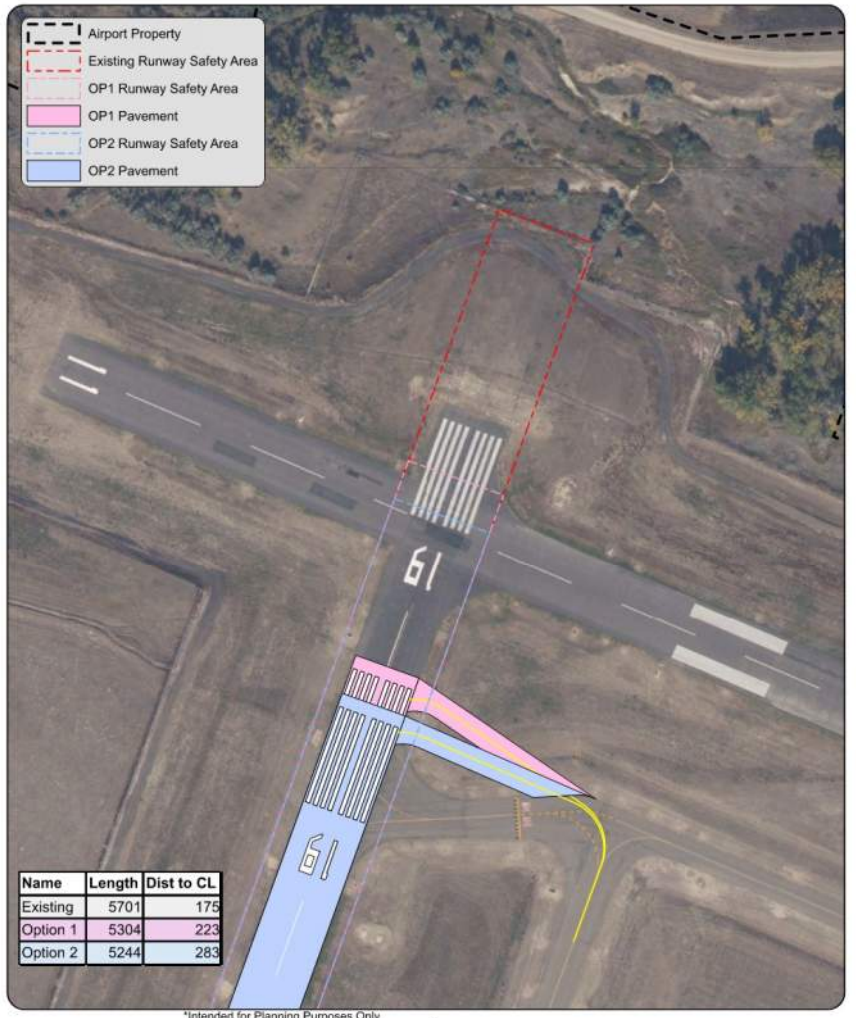
Airport Design Surfaces and TERPS Surfaces

- AC 150/5300-13B *Airport Design*
  - *13B Surface (threshold siting)*
  - *GQS Surface*
  - *Departure Surface*
- FAR Part 77
  - Approach
  - Transitional
  - Horizontal
  - Conical
- Order 8260.3G *US Standard for Terminal Instrument Procedures (TERPS)*

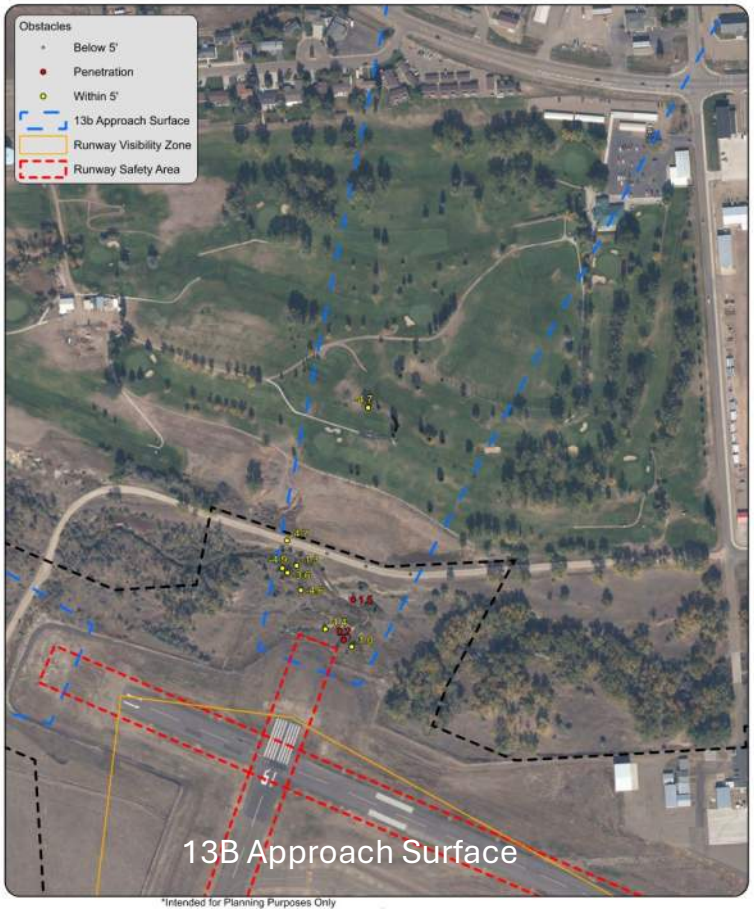


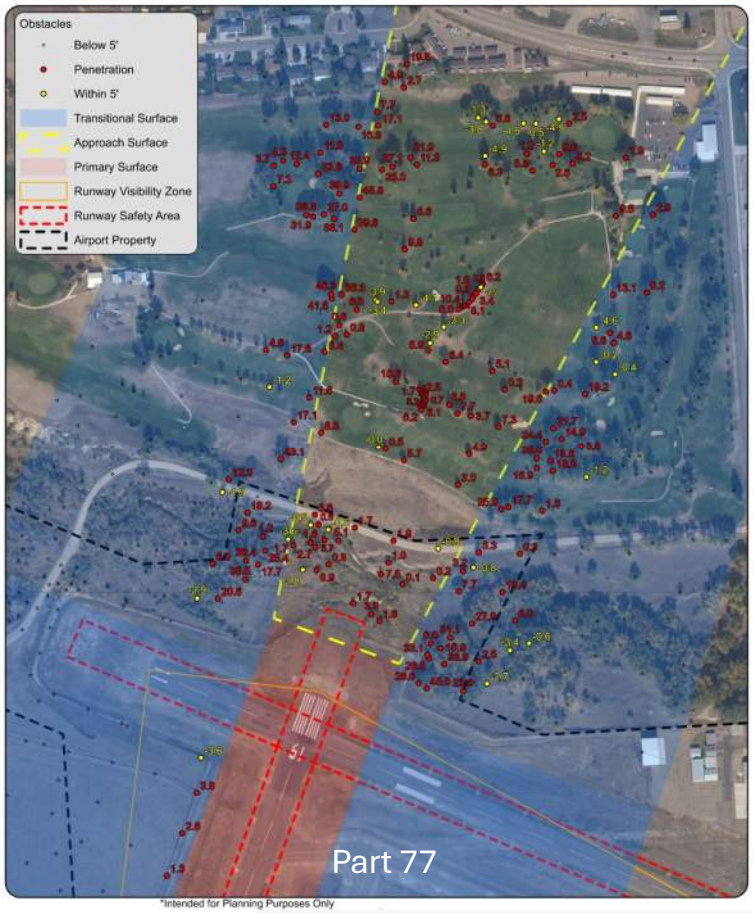
Runway 19 Threshold

- Existing: Intersecting Runways
  - Existing RW Length: 5,701’
  - Runway to Taxilane: 175’
- Option 1: Reduce Runway by 397’
  - New RW Length: 5,304’
  - Runway to Taxilane: 223’
- Option 2: Reduce Runway by 457’
  - New RW Length: 5,244’
  - Runway to Taxilane: 283’

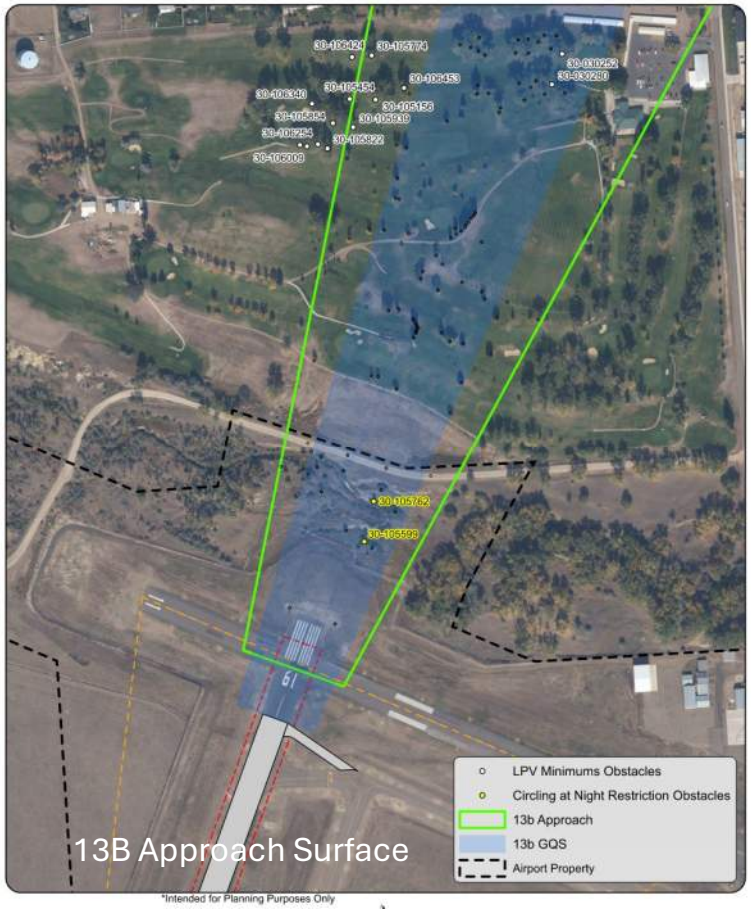


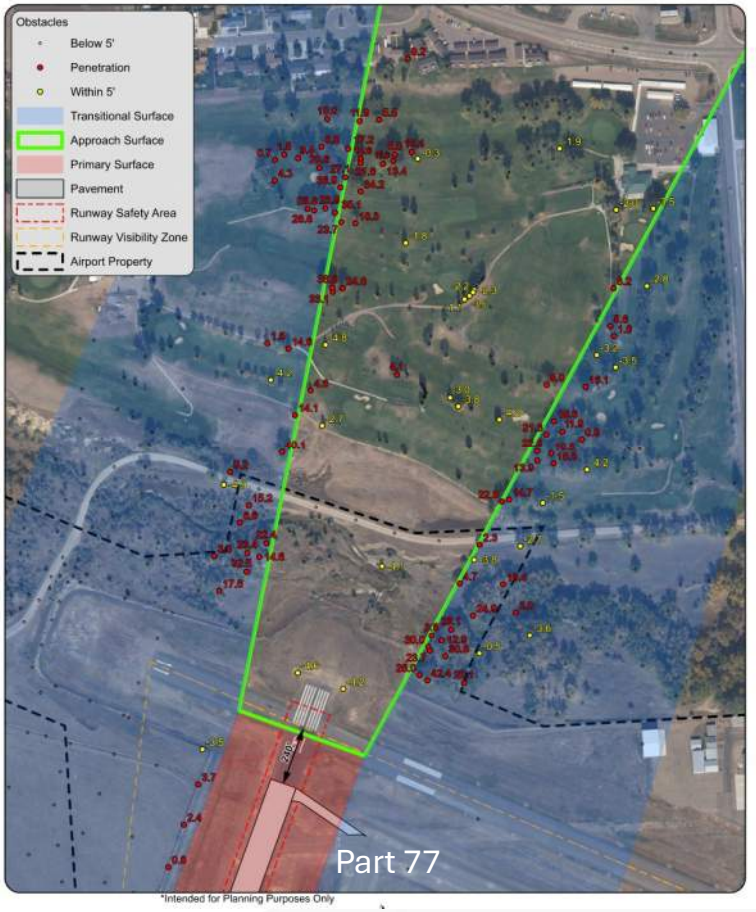
Runway 19- Existing



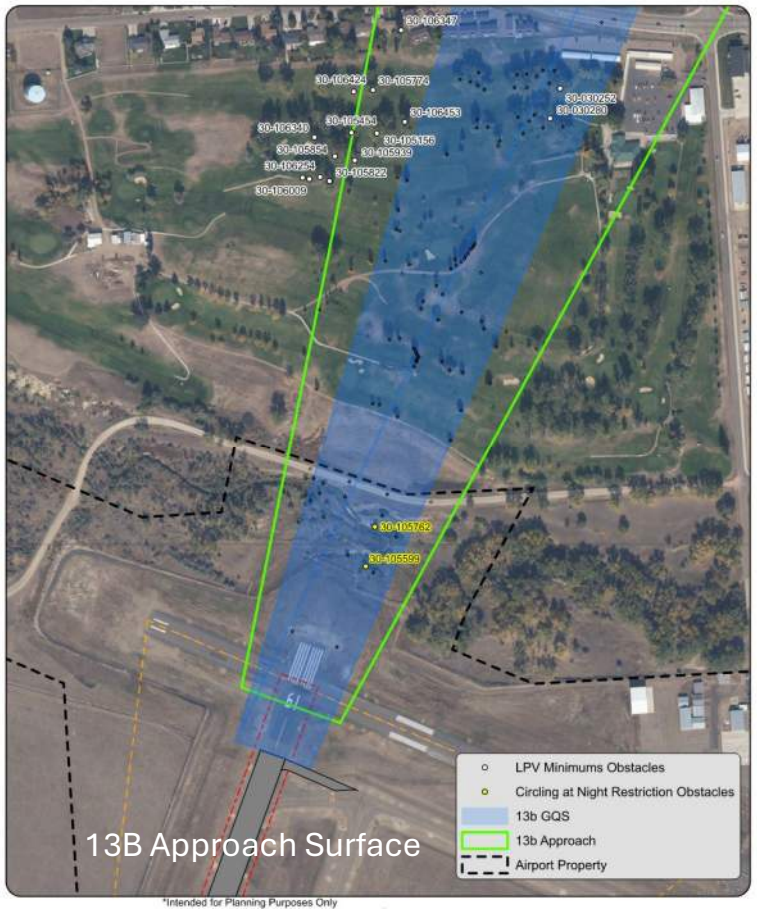


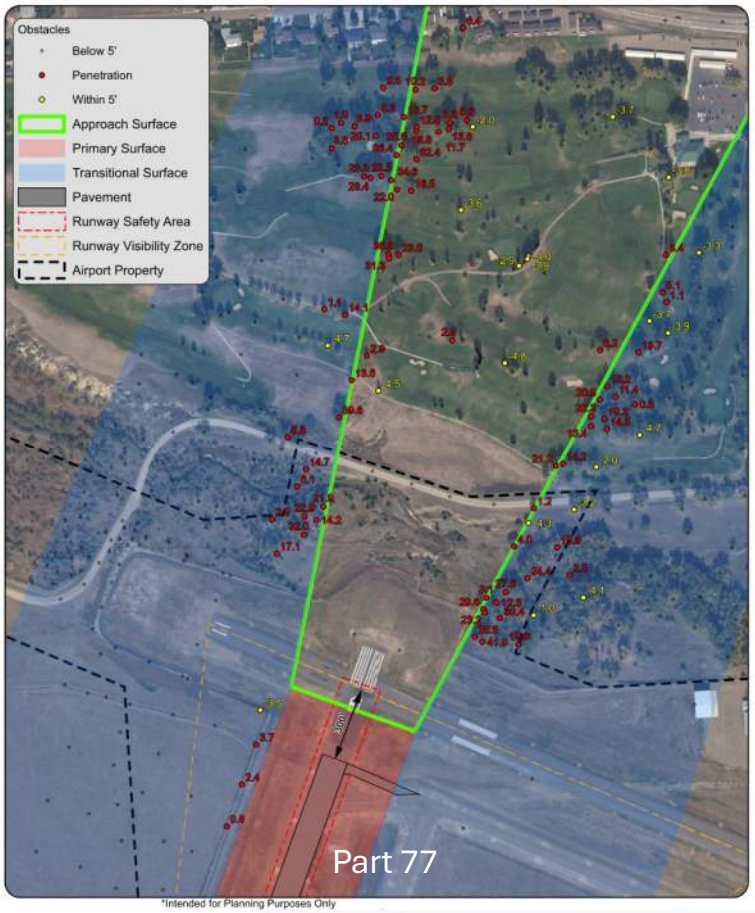
Runway 19- Option 1





Runway 19- Option 2





Runway 19 Approach Obstacle Comparison

Existing

	13B	GQS	FAR Part 77		FAR Part 77 (Airport)		FAR Part 77 (Golf)		Departure Surface	
			Slope	Trns	Slope	Trns	Slope	Trns	Slope	Trns
	20:1	30:1	34:1	7:1	34:1	7:1	34:1	7:1	40:1	3:1
Below 5 feet	34	62	27	+	1	+	24	+	+	+
Within 5 feet	8	14	19	11	4	1	14	5	28	6
0-10 feet	-	1	69	23	15	9	50	11	60	4
10-20 feet	-	-	5	19	-	4	5	15	2	2
20+ feet	-	-	6	26	-	12	6	14	9	5
Total Penetrations	-	1	80	68	15	25	61	40	71	11
Highest Penetration			45.8	46.3		45.0	45.8	46.3		

Option 1

	13B	GQS	FAR Part 77		FAR Part 77 (Airport)		FAR Part 77 (Golf)		Departure Surface	
			Slope	Trns	Slope	Trns	Slope	Trns	Slope	Trns
	20:1	30:1	34:1	7:1	34:1	7:1	34:1	7:1	40:1	3:1
Below 5 feet	111	111	93	+	15	+	74	+	+	+
Within 5 feet	-	-	15	11	1	2	14	6	23	2
0-10 feet	-	-	8	14	3	2	6	10	14	6
10-20 feet	-	-	7	15	-	5	4	10	10	3
20+ feet	-	-	7	19	-	11	6	8	13	7
Total Penetrations	-	-	22	48	3	18	16	28	37	16
Highest Penetration			42.4	35.1		42.4	38.6	40.1		

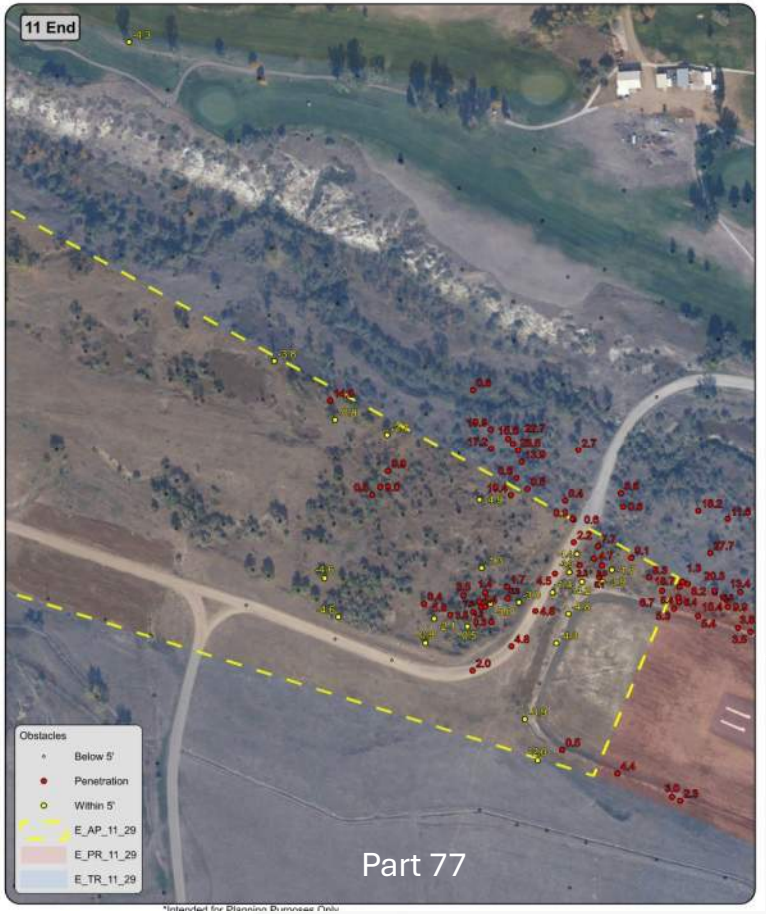
Option 2

	13B	GQS	FAR Part 77		FAR Part 77 (Airport)		FAR Part 77 (Golf)		Departure Surface	
			Slope	Trns	Slope	Trns	Slope	Trns	Slope	Trns
	20:1	30:1	34:1	7:1	34:1	7:1	34:1	7:1	40:1	3:1
Below 5 feet	116	116	99	+	16	+	75	+	+	+
Within 5 feet	-	-	10	9	1	1	9	6	19	2
0-10 feet	-	-	10	13	3	2	6	11	9	5
10-20 feet	-	-	7	13	-	6	6	8	11	3
20+ feet	-	-	7	16	1	9	3	10	17	4
Total Penetrations	-	-	24	42	4	17	15	29	37	12
Highest Penetration			36.4	41.9	29.6	41.9	36.4	39.6		

Runway 11



13B Approach Surface



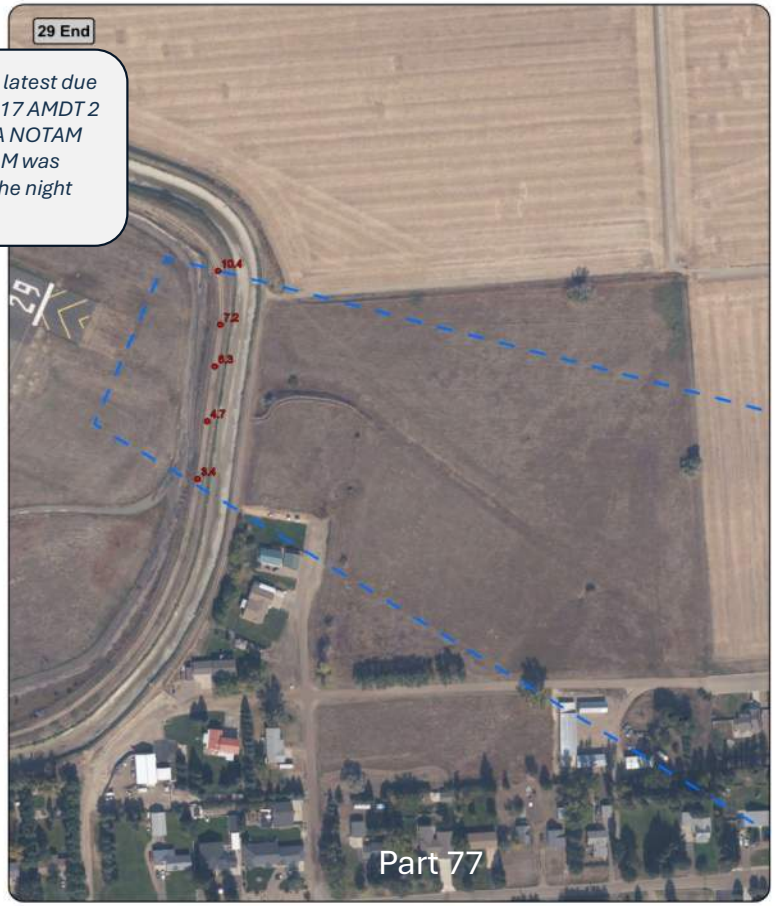
Part 77

Runway 29



RW29 night operations have been NA since 2017 at the latest due to 20:1 penetrations. They were identified during the 2017 AMDT 2 with three penetrations from a road "traverse_way". A NOTAM was issued when they were discovered. That NOTAM was cancelled when the ADMT 2 was published, NA'ing the night operations.

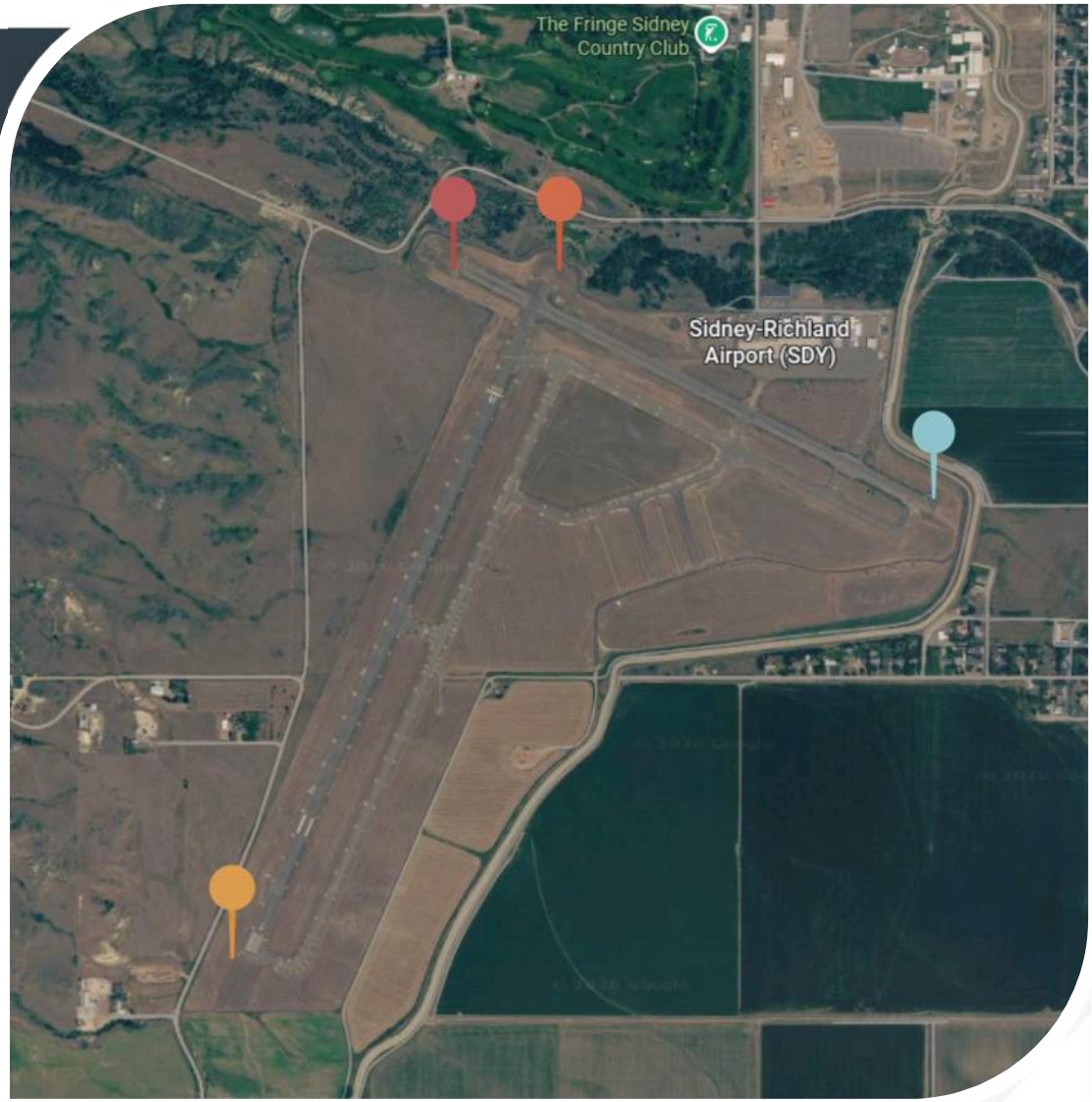
13B Approach Surface



Part 77

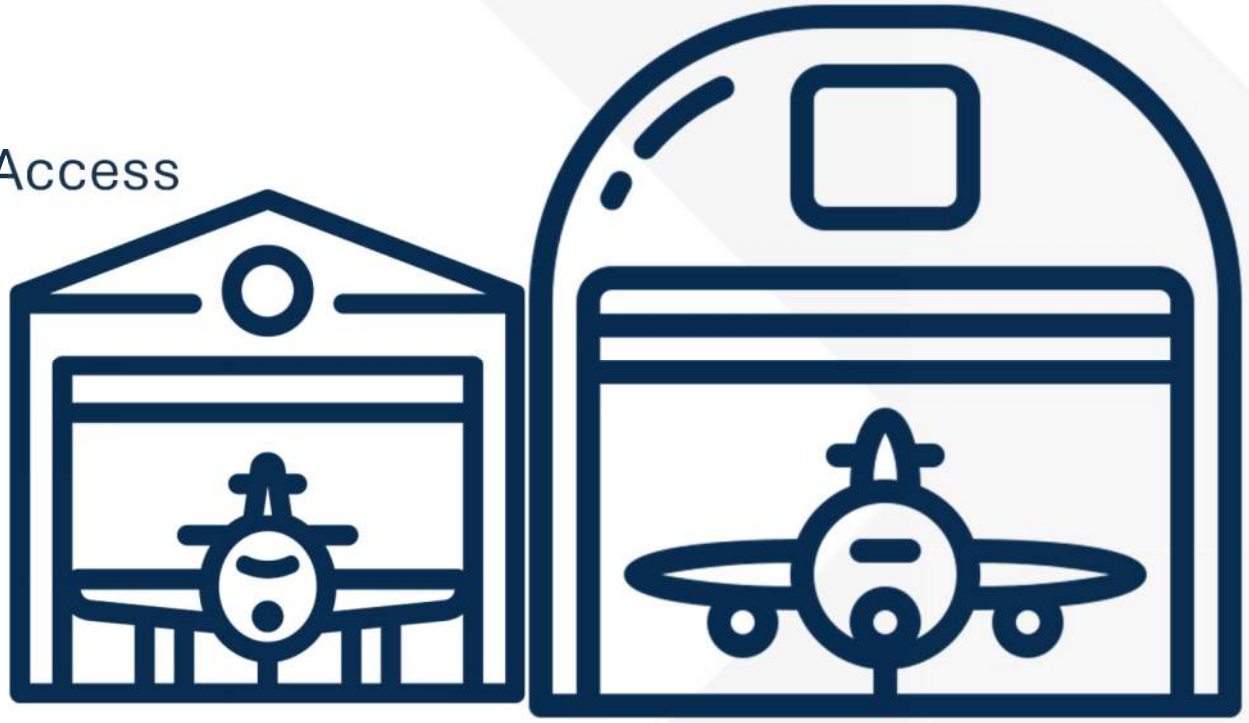
Preferred Airfield Alternatives

- **01** Runway Extension (450’)
  Approach Minimums (3/4 mile)
- **19** New Threshold- Option 1 (397’) or
  Option 2 (457’)
- **11** Obstruction Mitigation
- **29** Future Instrument Procedure



Terminal and Apron Area

- South Access
- Hangar Development
- Non-Standard Direct Access
- Apron Needs

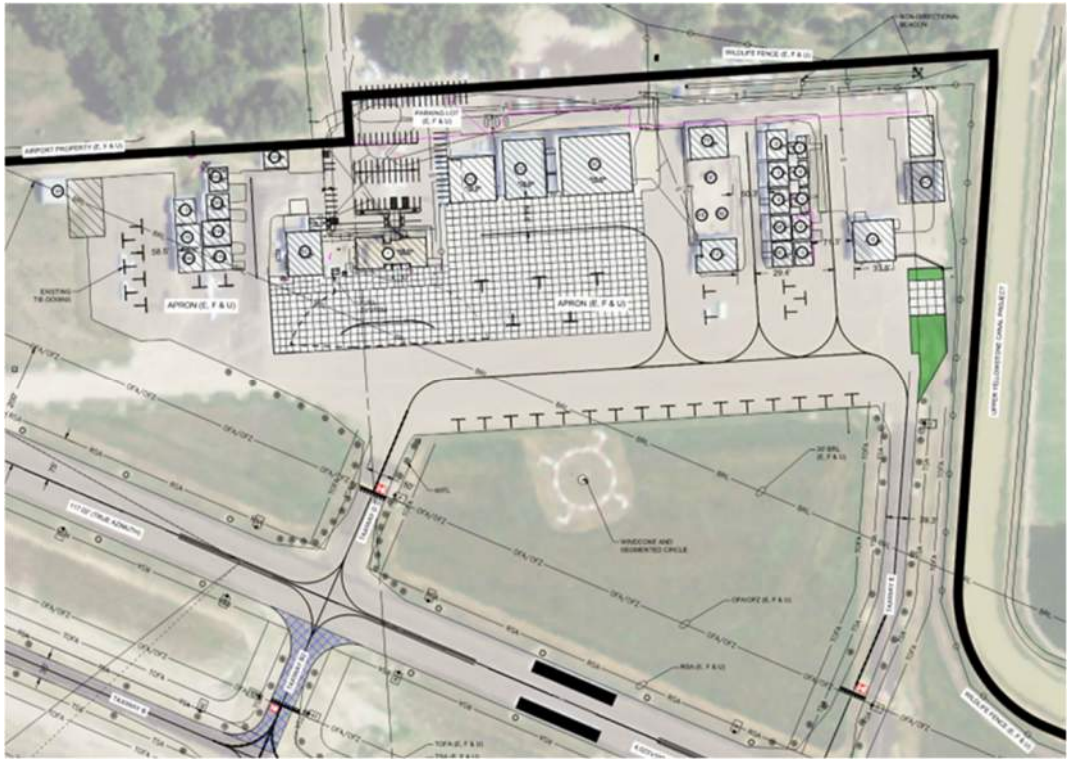


Typical Aircraft Hangar Attributes				
	T-Hangars	Small Storage Less than 6,000 sf	Large Storage More than 6,000 sf	FBO/SASO
Photo Examples				
Dedicated Apron	None	None	Equal to depth of hangar	Equal to depth of hangar (plus apron for services)
Airport Apron Access	No	No	No	Yes
Setbacks from Taxilanes	Yes - for Design Group (I or II)	Yes - for Design Group (I or II)	Yes plus Apron - for Design Group (II+)	Yes plus Apron - for Design Group (II+)
Airside Taxi Route	Yes - for Design Group (I or II)	Yes - for Design Group (I or II)	Yes - for Design Group (II+)	Yes - for Design Group (II+)
Public Road Access/Parking	No	Yes or No *	Yes*	Yes*

* Any business/corporate hangar located on an airport should have public road access and parking for customers/passengers. Particularly those customers/passengers who are not trained in driving on an airport.

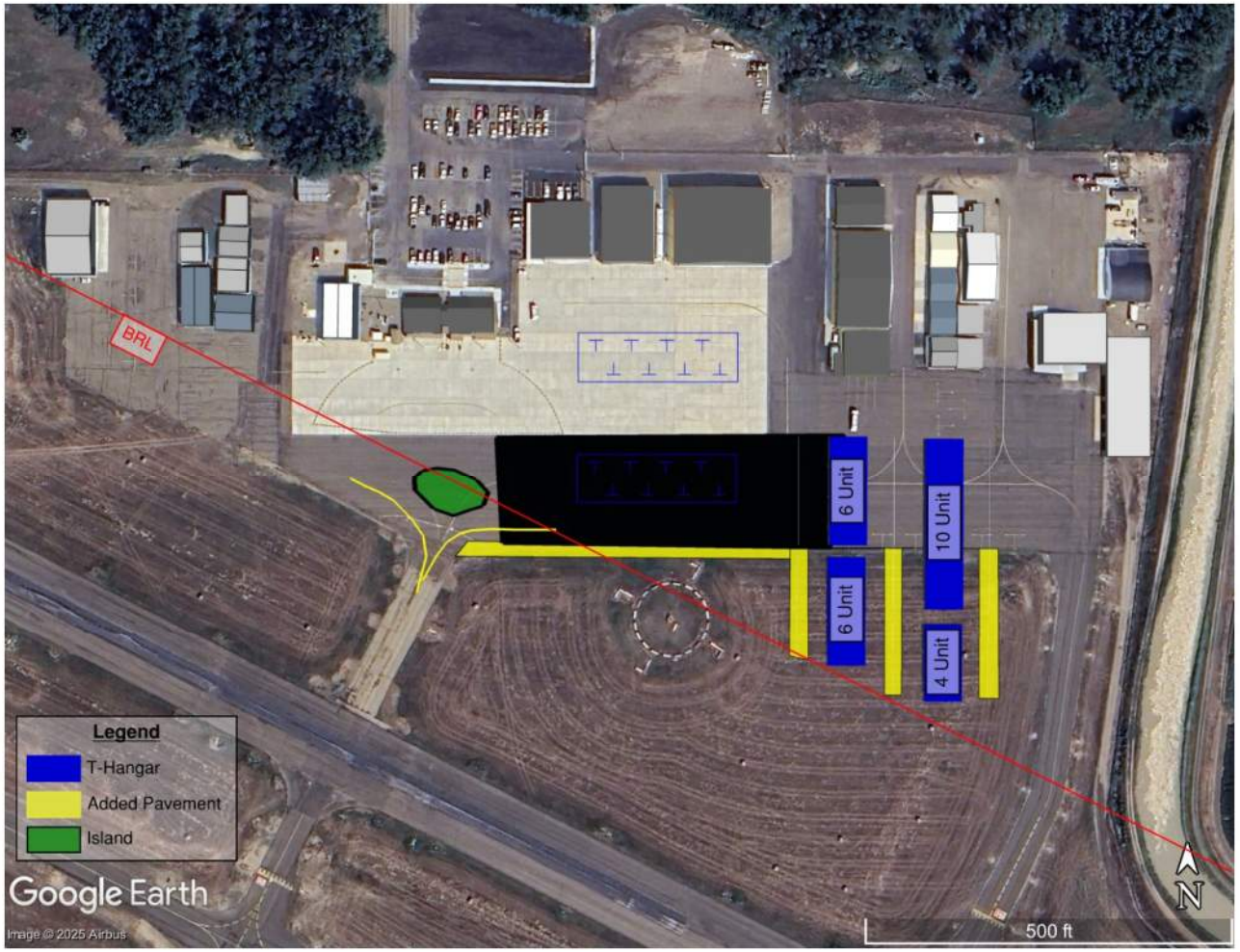
Existing Terminal Layout

Apron Layout



South Side Development





Terminal/Apron Option 1

- 4 T-Hangars (26 units)
- 8 Tiedowns North
- 8 Tiedowns South
- Taxilane Island for Direct Access Solution





Terminal/Apron Option 2

- 50’ x 50’ Box Hangars (16 units)
- 12 Tiedowns East
- 10 Tiedowns West
- Partial Parallel Taxiway

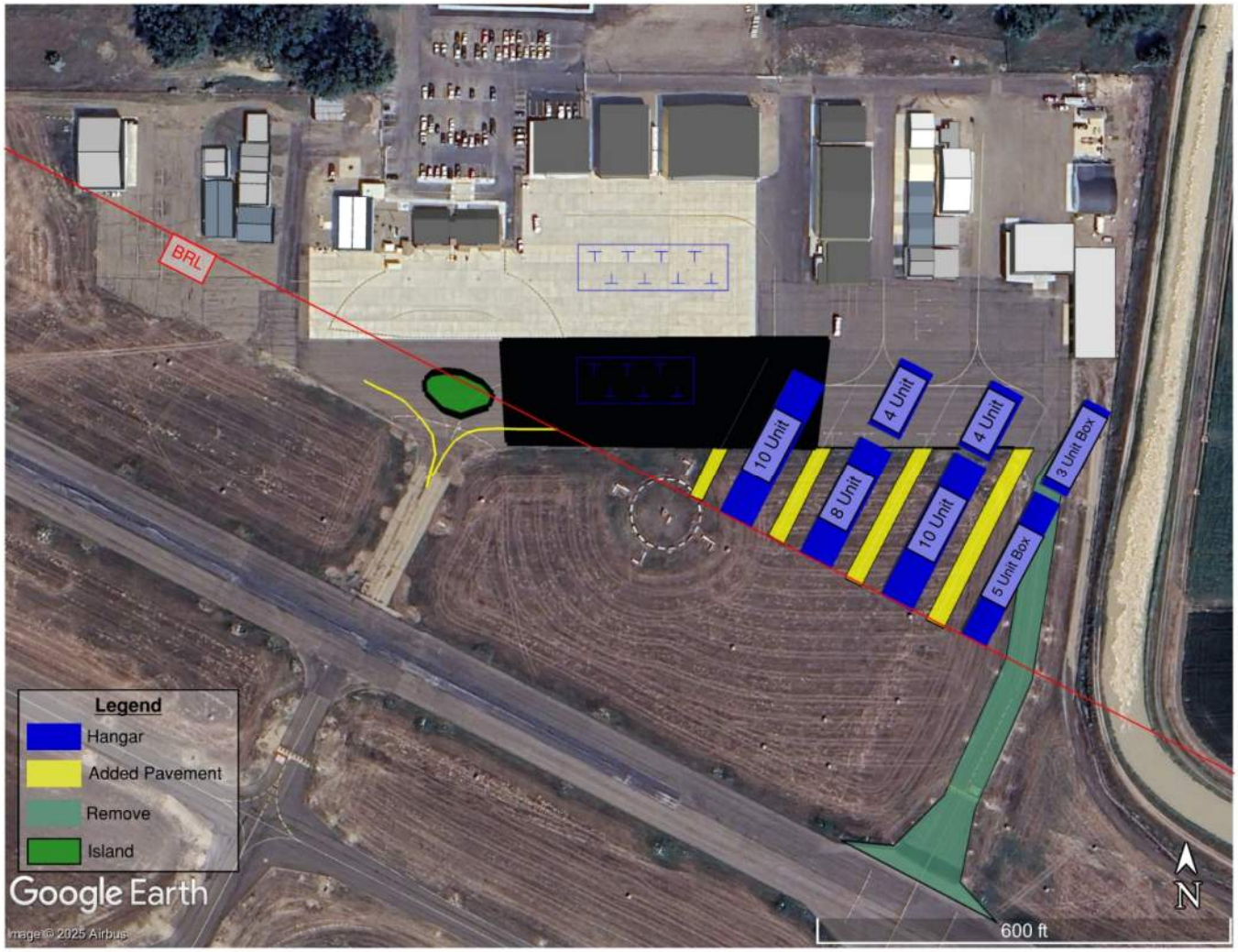




Terminal/Apron Option 3

- 50’ x 50’ Box Hangars (23 units)
- 3 - 80’ x 80’ Box Hangars
- 8 Tiedowns North
- 5 Tiedowns South
- Partial Parallel Taxiway





Terminal/Apron Option 4

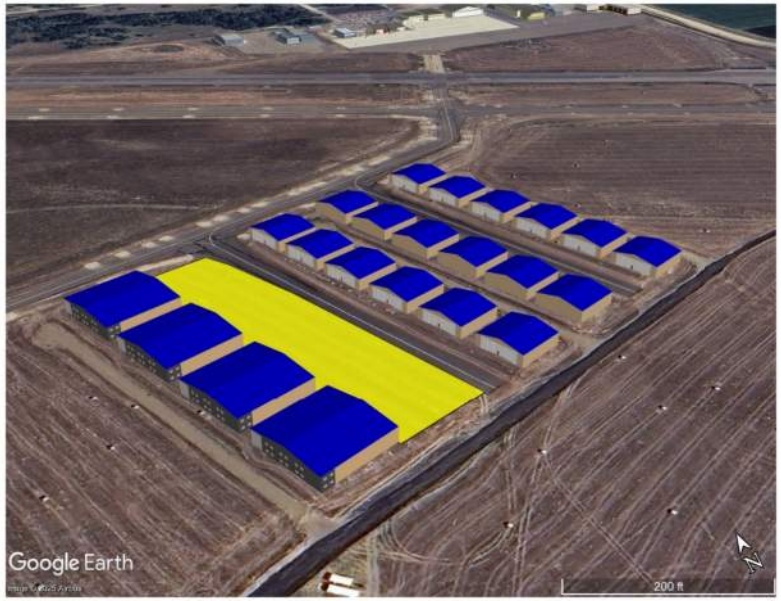
- 5 T-Hangars (36 units)
- 2 Executive Box Hangars (8 units)
- 8 Tiedowns North
- 6 Tiedowns South
- Current Taxiway Removal
- Taxilane Island for Direct Access Solution





South Terminal Option

- 18 - 80’ x 80’ Box Hangars
- 4 - 120’ x 120’ SASO Buildings



Next Steps

- Refined Terminal/Hangar Area Alternatives
- Ch. 3: Terminal Area and Support Infrastructure
- Ch. 4: Implementation
- Draft ALP
- **Project Website:** https://inputcentral.com/sdy-airportplan

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